General Algebra II Worksheet #2 Unit 10 Selected Solutions

For each of the following sequences

- **a. write the next 3 terms of the sequence;**
- **b. determine whether the sequence is arithmetic, geometric, or neither; and**
- **c. write an explicit formula for the sequence;**

1. 3, 6, 9, 12, 15, ...

a. 18, 21, 24 **b. arithmetic** **c. $a_n = 3n$**

2. 3, 6, 12, 24, 48, ...

a. 96, 192, 384 **b. geometric** **c. $a_n = 3(2)^{(n-1)}$**

3. 3, 6, 11, 18, 27, ...

a. 38, 51, 66 **b. neither** **c. $a_n = n^2 + 2$**

For each of the following sequences

- **a. write the next 3 terms of the sequence;**
- **b. determine whether the sequence is arithmetic or geometric; and**
- **c. write a recursive formula for the sequence;**

7. 5, 10, 20, 40, ...

a. 80, 160, 320 **b. geometric** **c. $a_1 = 5$; $a_{n+1} = 2a_n$**

8. 5, 10, 15, 20, ...

a. 25, 30, 35 **b. arithmetic** **c. $a_1 = 5$; $a_{n+1} = a_n + 5$**

For each of the following sequences

- **a. write the first 5 terms of the sequence; and**
- **b. determine whether the sequence is arithmetic, geometric or neither.**

11. $a_1 = 3$; $a_{n+1} = a_n + 5$

a. 3, 8, 13, 18, 23 **b. arithmetic**

12. $a_1 = 3$; $a_{n+1} = 5a_n$

a. 3, 15, 75, 375, 1875 **b. geometric**

16. $a_n = 2n$

a. 2, 4, 6, 8, 10 **b. arithmetic**

18. $a_n = 2(3)^{(n-1)}$

a. 2, 6, 18, 54, 162 **b. geometric**